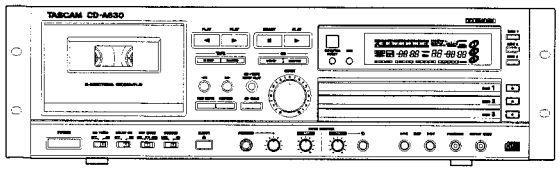

TASCAM
TEAC Professional Division

SERVICE MANUAL

CD-A630

COMPACT disc DIGITAL AUDIO

Compact Disc Player/Reverse Cassette Deck

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INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

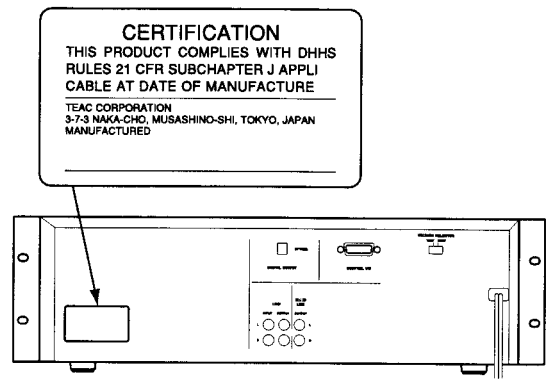
Effective : December, 2000

S-0035

1. SAFETY INFORMATION

This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as a class 1 laser product. There is no hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings.
The label required in this regulation is shown ①.

① For U.S.A.


CERTIFICATION
THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLI CABLE AT DATE OF MANUFACTURE
TEAC CORPORATION
3-7-3 NAKA-CHO, MUSASHINO-SHI, TOKYO, JAPAN
MANUFACTURED

● CAUTION

USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Optical pickup:

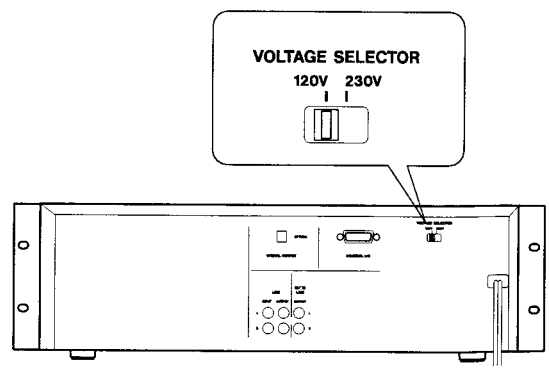
Type	: LTOH96MK or GH5C105A1APK
Manufacturer	: SHARP Corporation
Laser output	: Less than 0.5 mW on the objective lens
Wavelength	: 770-795 nm

Voltage Conversion

(General export models only)

Be sure to remove the power cord from the AC outlet before repositioning the voltage converter switch.

1. Locate the voltage selector on the rear panel.
2. Using a flat-bladed screwdriver, set to the appropriate 230V or 120V position according to your area.



2. SPECIFICATIONS

仕　様

CD player section

(Audio)

Number of channels 2
Frequency response ..... 10 - 20,000 Hz ± 1 dB
Signal-to-noise ratio ..... 90 dB (WTD)
Dynamic range ..... 90 dB
Total harmonic distortion ..... 0.02% (1 kHz)
Wow and flutter ..... Unmeasurable (quartz accuracy)
Channel separation ..... 70 dB
Pitch Control ..... ±12 %
Output (RCA) ..... +6 dBV (2 Vrms)
Digital filter ..... 8-times oversampling digital filter

(Signal format)

Sampling frequency ..... 44.1 kHz
D/A converter ..... 16-bit linear/channel
Channel bit rate ..... 4.3218 Mb/sec.
Channel modulation code ..... EFM
Error correction ..... CIRC

Cassette section

Track system ..... 4-track 2-channel stereo
Heads ..... Record/playback x 1 (rotary reverse)
erase x 1
Type of tape ..... Cassette tape C-60, C-90
Tape speed ..... 4.76 cm/sec.
Motor ..... DC servo motor x 1
Wow and flutter ..... 0.08% (W. RMS)
Frequency response (overall) ..... 63 - 15,000 Hz ± 3 dB, Type II
63 - 14,000 Hz ± 3 dB, Type I
Signal-to-noise ratio (overall) .....
57 dB (Dolby NR off, 3% THD level, weighted)
66 dB (DOLBY NR on, over 5 kHz)
Fast winding time ..... Approx. 120 sec. (with C-60)
Input ..... Line; –10 dBV (300 mV)
(input impedance of 50 kohms or more)
Output ..... Line; –10 dBV (300mV)
(load impedance of 50 kohms or more)
Headphones; 5mW/33 ohms

General

Power requirements ..... 120/230 V AC, 50-60 Hz
(U.S.A./Canada/general export model)
230 V AC, 50 Hz (Europe/U.K. model)
Power consumption ..... 18 W
Dimensions (W x H x D) ..... 483 x 133 x 270 mm
(19" x 5-1/4" x 10-5/8")
Weight ..... 6.7 kg (14.77 lbs.)
Standard Accessories ..... Wireless remote control RC-A630 x 1
Battery (SUM-3, "AA", "R6" type) x 2
Rack mounting screw kit x 1

CDプレーヤー部

オーディオチャンネル数 2チャンネル
周波数特性 ..... 10～20,000Hz ±1dB
SN比 ..... 90dB (WTD)
高調波歪率 0.02% (1kHz)
ワウフラッター ..... 測定限界値以下(水晶発振精度)
チャンネルセパレーション 70dB
ピッチコントロール ..... ±12%
アナログ出力 (RCA) ..... +6 dBV (2 Vrms)
デジタル出力 (OPTICAL) ..... TOSLINK
(IEC-60958 TYPE II)
デジタルフィルター .....
8倍オーバーサンプリングデジタルフィルター

カセット部

トラック方式 ..... 4トラック2チャンネル ステレオ
ヘッド構成 ..... 録音／再生ヘッド x 1 (回転リバース式)
消去ヘッド x 1
テープ速度 4.76cm/sec
ピッチコントロール ..... ±12%
モーター ..... DCサーボモーター x 1
ワウフラッター ..... 0.08% (W.RMS)
周波数特性 (総合) ..... 63～15,000Hz ±3dB : Type II
63～14,000Hz ±3dB : Type I
SN比 (総合) ..... 57dB (ドルビーNRオフ, 3%THDレベルWTD)
66dB (ドルビーB NRオン, 5kHz以上)
早巻時間 約120秒 (C-60テープ)
ライン入力 (RCA) ..... −10 dBV (300mV)
入力インピーダンス 50kΩ
ライン出力 (RCA) ..... −10 dBV (300mV)
負荷インピーダンス50kΩ
ヘッドホン出力 5mW/33Ω

一般

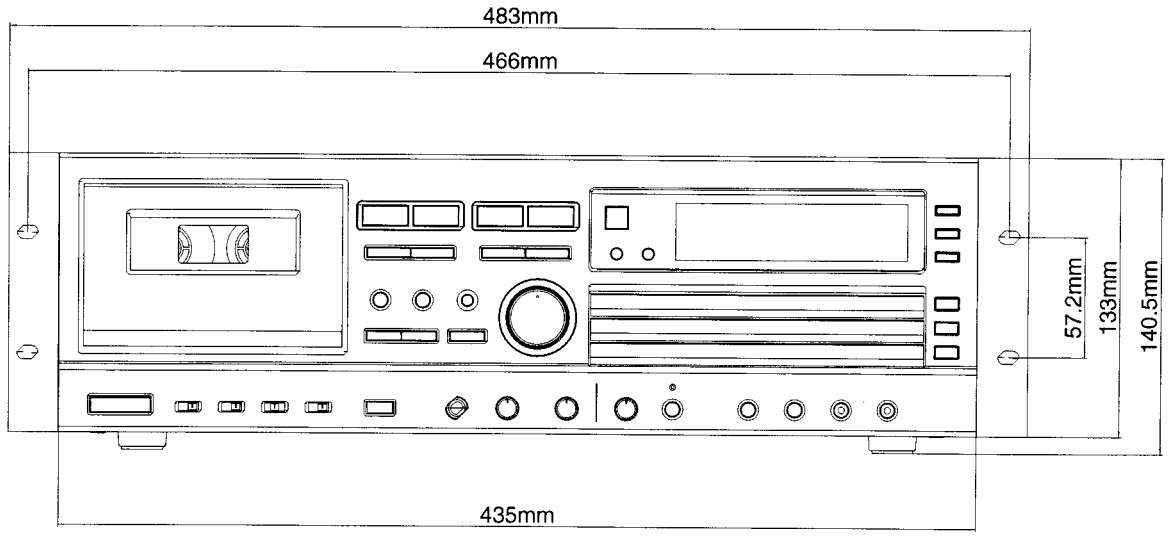
電源 ..... 100V AC 50-60Hz
消費電力 18W
外形寸法 ..... 483 x 133 x 270mm (WxHxD)
質量 6.7kg
付属品 ..... リモコン　RC-A630 x 1個
乾電池 (単3、SUM-3) x 2本
ラックマウント用ねじ x 1式

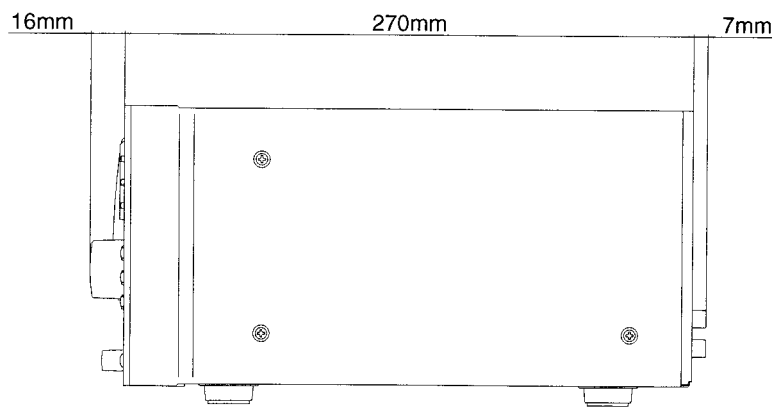
Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

- Improvements may result in specification or feature changes without notice.

ドルビーノイズリダクションはドルビーラボラトリーズライセンシングコーポレーションからの実施権に基づき製造されています。
ドルビー、DOLBY及びダブルD記号◻◻はドルビーラボラトリーズライセンシングコーポレーションの登録商標です。

- 仕様および外観は、改善のため予告なく変更することがあります。





3. ADJUSTMENTS AND CHECKS

調整と確認

3-1 CD PLAYER SECTION

3-1-1 Pitch control adjustment

1. Connect the frequency counter to the CD OUT.
2. Turn on a CD PITCH CONTROL switch at the stop mode.
3. Play the track 2 (1kHz, 0dB) of the MCD-111.
4. Set a CD PITCH CONTROL knob to a center, and adjust R811 of CONTROL PCB so that the output becomes 1kHz.
5. When the CD PITCH CONTROL knob is rotated to the – side, make sure the frequency becomes 880 Hz or lower, and make sure it becomes 1,120 Hz or higher when the knob is rotated to the + side.

3-1-2 Output level check

1. Connect the AC voltmeter to the CD OUT.
2. Play the track 2 (1kHz, 0dB) of the MCD-111, and check the output level.
   Specification: 2.0±0.5Vrms

3-1-3 Distortion check

1. Connect the distortion meter to the CD OUT.
2. Play the track 2 (1kHz, 0dB) of the MCD-111, and check the distortion.
   Specification: 0.03% or less (400Hz HPF + 22kHz LPF)

3-1-4 Frequency response check

1. Play the track 3-6 (20Hz – 20kHz, 0dB) of the MCD-111, and check that output level are within the specified values with respect to the 1kHz reference level.
   Specification: within ±1dB

3-1-5 S/N check

1. Play the track 7 (non-signal) of the MCD-111, and check that noise level are within the specified values with respect to the 1kHz reference level.
   Specification: 83dB or more (22kHz LPF + IEC-A)

3-1-6 Channel separation check

1. Play the track 8 (L:1kHz / R:non-signal) of the MCD-111, and check the leakage from Lch to Rch.
2. In the same way, play the track 10 (R:1kHz / L:non-signal) of the MCD-111, and check the leakage from Rch to Lch.
   Specification: 70dB or more (22kHz LPF + IEC-A)

3-1 CDプレーヤー部

3-1-1 ピッチコントロール調整

1. CD OUT端子に周波数カウンターを接続する。
2. 停止状態でCD PITCH CONTROLスイッチをONにする。
3. MCD-111の2曲目(1kHz, 0dB)を再生する。
4. CD PITCH CONTROLつまみをセンターにセットし、出力が1kHzになるように、CONTROL PCBのR811を調整する。
5. CD PITCH CONTROLつまみを－方向に回したとき、周波数が880Hz以下、＋方向に回したとき、1,120Hz以上になることを確認する。

3-1-2 出力レベルチェック

1. CD OUT端子にACボルトメーターを接続する。
2. MCD-111の2曲目(1kHz, 0dB)を再生し、出力レベルを確認する。
   規格: 2.0±0.5Vrms

3-1-3 歪率チェック

1. CD OUT端子に歪率計を接続する。
2. MCD-111の2曲目(1kHz, 0dB)を再生し、歪率を確認する。
   規格: 0.03%以下（400Hz HPF + 22kHz LPF)

3-1-4 周波数特性チェック

1. MCD-111の3～6曲目(20Hz～20kHz, 0dB)を再生し、基準レベル(1kHz, 0dB)に対し規格内にあることを確認する。
   規格: ±1dB以内

3-1-5 S/Nチェック

1. MCD-111の7曲目(無信号)を再生し、ノイズレベルが基準レベルに対し規格内であることを確認する。
   規格: 83dB以上（22kHz LPF + IEC-A）

3-1-6 チャンネルセパレーションチェック

1. MCD-111の8曲目(L:1kHz / R: 無信号)を再生し、Rchへの漏れを確認する。
2. 同様に10曲目(R:1kHz / L: 無信号)を再生し、Lchへの漏れを確認する。
   規格: 70dB以上（22kHz LPF + IEC-A）

3-2 CASSETTE DECK SECTION

- Before performing adjustments and checks clean and demagnetize the entire tape path.
- In general, adjustments and checks are made in the order of Lch then Rch. Double REF. Nos. indicate Lch/Rch. (Example; R181/R182)
- 0dB is referenced to 0.775V.
- The AC voltmeter used in the procedures must have an input impedance of 1MΩ or more.
- Unless specified otherwise, adjustments and checks are made in FWD direction.

3-2 カセットデッキ部

- 調整・確認の前に、テープ走行系の消磁と清掃を行なってください。
- 特に指定のない限り、調整はLch, Rchの順序で行なってください。尚、R181/R182のように記されている回路番号はLch/Rchを示します。
- 0dBは0.775Vです。
- 測定に使用するレベル計の入力インピーダンスは1MΩ以上のものを使用してください。
- 特に指定のない場合、調整および確認はFWD方向で行なってください。

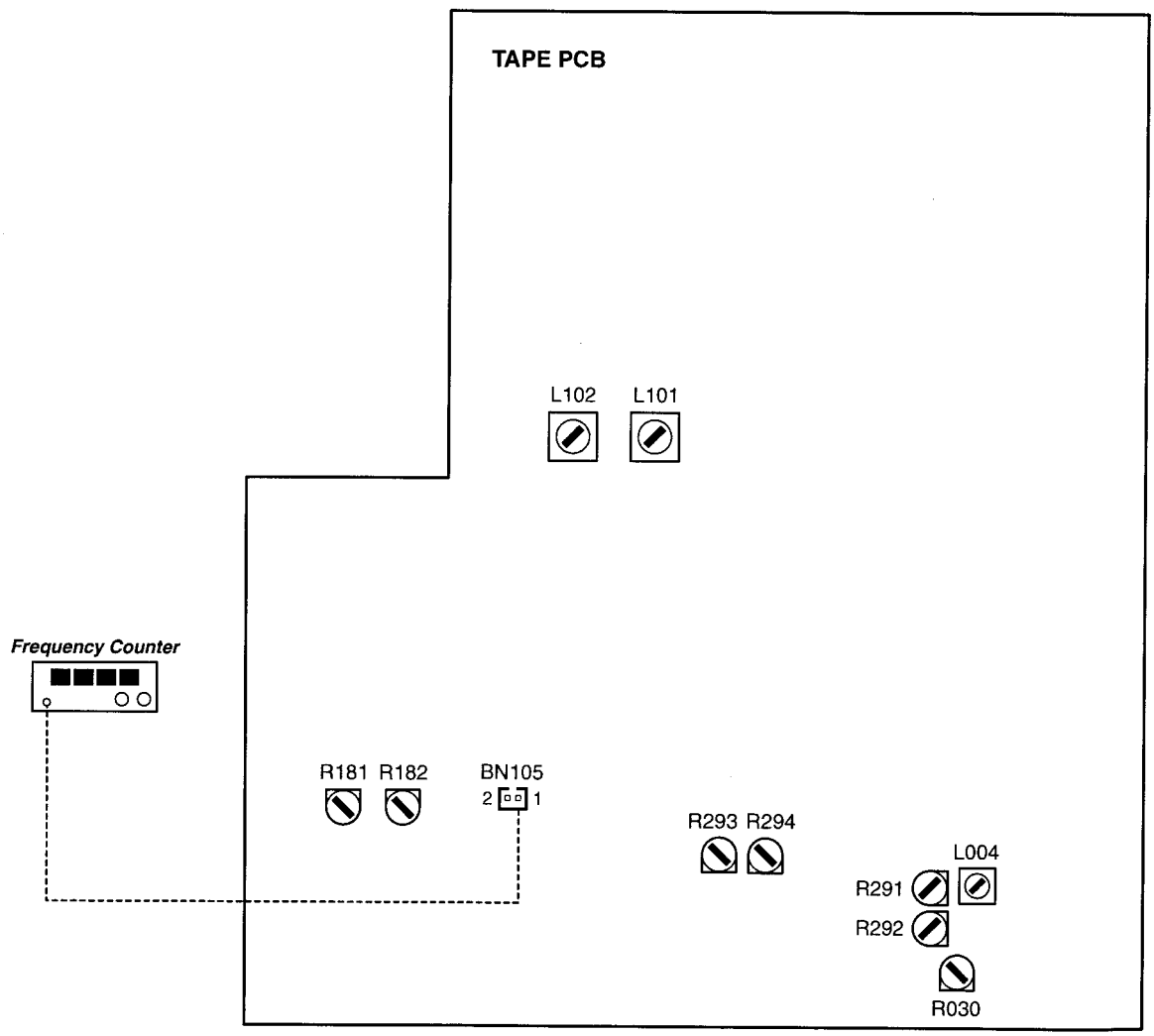


Fig. 3-1 Adjustment locations

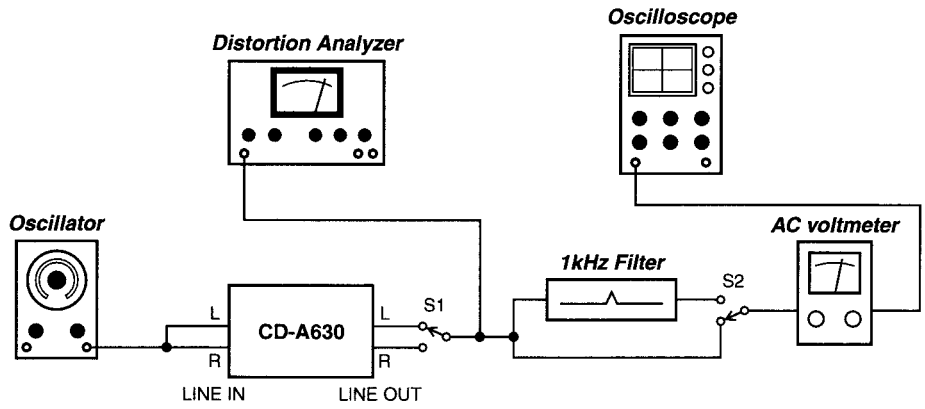


Fig. 3-2 Basic test setup

3-2-1 Mechanical performance 機構系

ITEM 項 目	SETTING 設 定	TEST TAPE テストテープ	ADJUSTMENTS 調整ケ所	MEASURING POINTS, RESULT 測定ケ所・調整値
1. Wow and flutter ワウ・フラッタ	PITCH CONTROL: Center FWD and REV play	MTT-111N	Check	0.19% or less (WRMS)
2. Tape speed テープ速度	PITCH CONTROL: Center FWD play	MTT-111N	CONTROL PCB R652	3,000 ±20Hz
	REV play	MTT-111N	Check	3,000 ±75Hz
3. Pitch control variable range ピッチコントロール 可変幅		MTT-111N	Check	PITCH CONTROL −: 2,640Hz or lower PITCH CONTROL +: 3,360Hz or higher

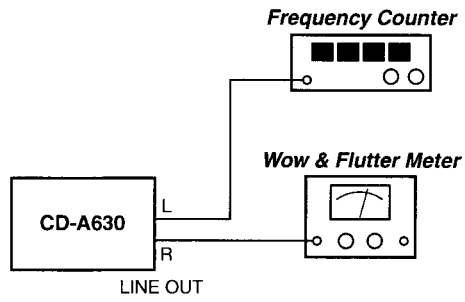
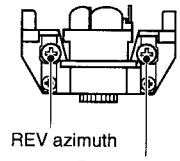
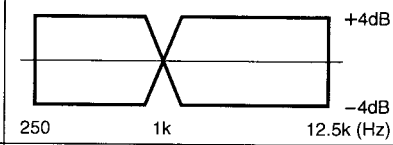


Fig. 3-3

3-2-2 Playback performance 再生系

Deck settings:
Mode: PLAY
DOLBY NR Switch: OFF
PITCH CONTROL: Center

TEAC test tapes:
MTT-150 : For Dolby level calibration
MTT-25702 : For playback frequency response check NORMAL tape
MTT-5513 : For S/N check NORMAL tape

ITEM 項 目	SETTING 設 定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整ケ所	MEASURING POINTS, RESULT 測定ケ所・調整値	REMARKS 備 考
1. Head azimuth adjustment アジマス調整	Connection: Fig. 3-4 Check and adjust in FWD, REV respectively FWD、REVそれぞれ調整・確認	MTT-25702 (12.5kHz)	Azimuth screws	LINE OUT: Maximum output level at L & R-ch Phase: within 45° Lch、Rchとも出力最大位相: 45° 以内 (Fig. 3-5)	
2. Playback output level 再生出力レベル	Connection: Fig. 3-2	MTT-150	R181/R182	LINE OUT: −8.2dB (300mV)	Ref. output level 基準出力レベル
3. Meter level メーターレベル		MTT-150	Check	LEVEL METER: 0dB ±1 dot	
4. PHONES output level PHONES 出力レベル	Connection: Fig. 3-2 PHONES LEVEL: MAX	MTT-150	Check	PHONES: −5.7 ±3dB (280mV〜560mV)	32 Ω load 32 Ω負荷
5. Playback frequency response 再生周波数特性	Connection: Fig. 3-2	MTT-25702	Check		
6. Playback S/N ratio 再生S/N比	Connection: Fig. 3-2	MTT-5513 Playback the leader tape portion リーダーテープ部を再生	Check	46dB min.	Ratio of ref. level to noise 基準出力レベルとノイズの比

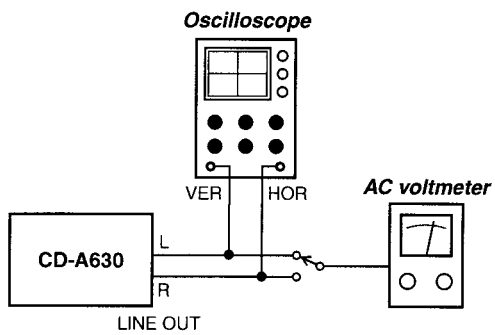


Fig. 3-4

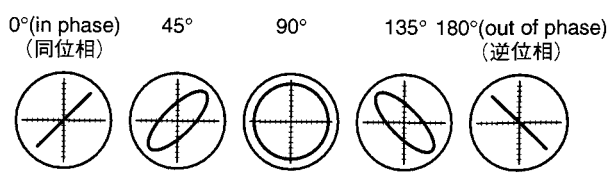
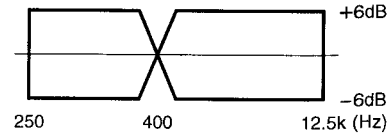


Fig. 3-5

3-2-3 Recording performance 録音系

Deck settings:
Mode: REC/PLAY
DOLBY NR Switch: OFF
PITCH CONTROL: Center
SOURCE Switch: LINE
INPUT Control: Specified position (Item 2)

TEAC recording test tapes:
MTT-5513 : For NORMAL
MTT-5563 : For CrO2

ITEM 項 目	SETTING 設 定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整ケ所	MEASURING POINTS, RESULT 測定ケ所・調整値	REMARKS 備 考
1. Min. LINE input level ライン最小入力レベル	Connection: Fig. 3-2 INPUT Control: Max. Mode: REC-PAUSE	400Hz/ −19dB (87mV)	Check	LINE OUT: −8.2 ±3dB (210mV~420mV)	
2. Specified LINE input level ライン規定入力レベル	Connection: Fig. 3-2 Mode: REC-PAUSE	400Hz/ −8.2dB (300mV)	INPUT Control	LINE OUT: −8.2dB (300mV)	After adjusting, do not move (Specific position) 調整後は動かさないこと (規定位置)
3. Bias osc frequency バイアス発振周波数	Connection: Fig. 3-1 TAPE: MTT-5513 Mode: REC-PAUSE	No signal	L004	BN105 Pin 1: 85 ±3kHz	
4. Record bias 録音バイアス	Connection: Fig. 3-2 TAPE: MTT-5513 MTT-5563	250Hz/10kHz −34dB (15mV)	NORMAL: R291/R292 CrO2: R030	LINE OUT: Nearly equal level at both frequencies 両周波数の録再出力が同レベル (±0.5dB)	
5. MPX filter MPX フィルター	Connection: Fig. 3-2 TAPE: MTT-5513	19kHz/ −12dB (195mV)	L101/L102	30dB min.	Ratio of ref. level to signal 基準出力レベルに対する比
6. Record level 録音レベル	Connection: Fig. 3-2 TAPE: MTT-5513	400Hz/ −8.2dB (300mV)	R293/R294	LINE OUT: −8.2 ±1dB (270mV~330mV)	
	TAPE: MTT-5563		Check	LINE OUT: −8.2 ±1.5dB (252mV~357mV)	
7. Total harmonic distortion 総合歪率	Connection: Fig. 3-2 TAPE: MTT-5513 MTT-5563	400Hz/ −12dB (195mV)	Check	NORMAL: 2.0% or less CrO2 : 2.5% or less	
8. Overall frequency response 録再周波数特性	Connection: Fig. 3-2 TAPE: MTT-5513 MTT-5563	250Hz−12.5kHz −34dB (15mV)	Check		
9. Overall S/N ratio 総合S/N比	Connection: Fig. 3-2 TAPE: MTT-5513 MTT-5563	No signal	Check	NORMAL: 45dB min. CrO2 : 46dB min.	Ratio of ref. level to noise 基準出力レベルとノイズの比

ITEM 項 目	SETTING 設 定	INPUT SIGNAL 入力信号	ADJUSTMENTS 調整ケ所	MEASURING POINTS, RESULT 測定ケ所・調整値	REMARKS 備 考
10. Erase efficiency 消去率	Connection: Fig. 3-2 TAPE: MTT-5563 1kHz B.P.F in	1kHz/+1dB (870mV)	Check	60dB min.	Ratio of the 1kHz recorded portion to the erased portion. 未消去部分と消去部分の比
11. REC MUTE function REC MUTE 効果	Connection: Fig. 3-2 TAPE: MTT-5563 1kHz B.P.F in	1kHz/+1dB (870mV)	Check	55dB min.	Ratio of the 1kHz recorded portion to the "REC MUTE" portion. 録音部分と"REC MUTE"部分の比
12. Channel separation チャンネルセパレーション	Connection: Fig. 3-2 TAPE: MTT-5563 1kHz B.P.F in	Lch: 1kHz/−9dB (275mV) Rch: No signal	Check	35dB min.	Ratio of Lch (1kHz) to Rch (no signal). Lch (1kHz) とRch (無信号) の比
13. Adjacent track crosstalk トラック間クロストーク	Connection: Fig. 3-2 TAPE: MTT-5563	Lch: No signal Rch: 125Hz/−9dB (275mV)	Check	40dB min.	Invert tape and play Rch track. Check leakage level against the output reference of previously recorded portion. テープを反転して再生した時のRch出力レベルの比
14. CD SYNC function CD SYNC 機能	Connection: Fig. 3-2 SOURCE: CD CD SYNC: On TAPE: MTT-5513	MCD-111 Track 21 (1kHz/−10dB)	Check	LINE OUT: −8.2±1.5dB (252mV~357mV)	

PARTS LIST SECTION

NOTES

- PC boards shown are viewed from parts side.
- Parts marked with * require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
  [K]:KOREA [E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

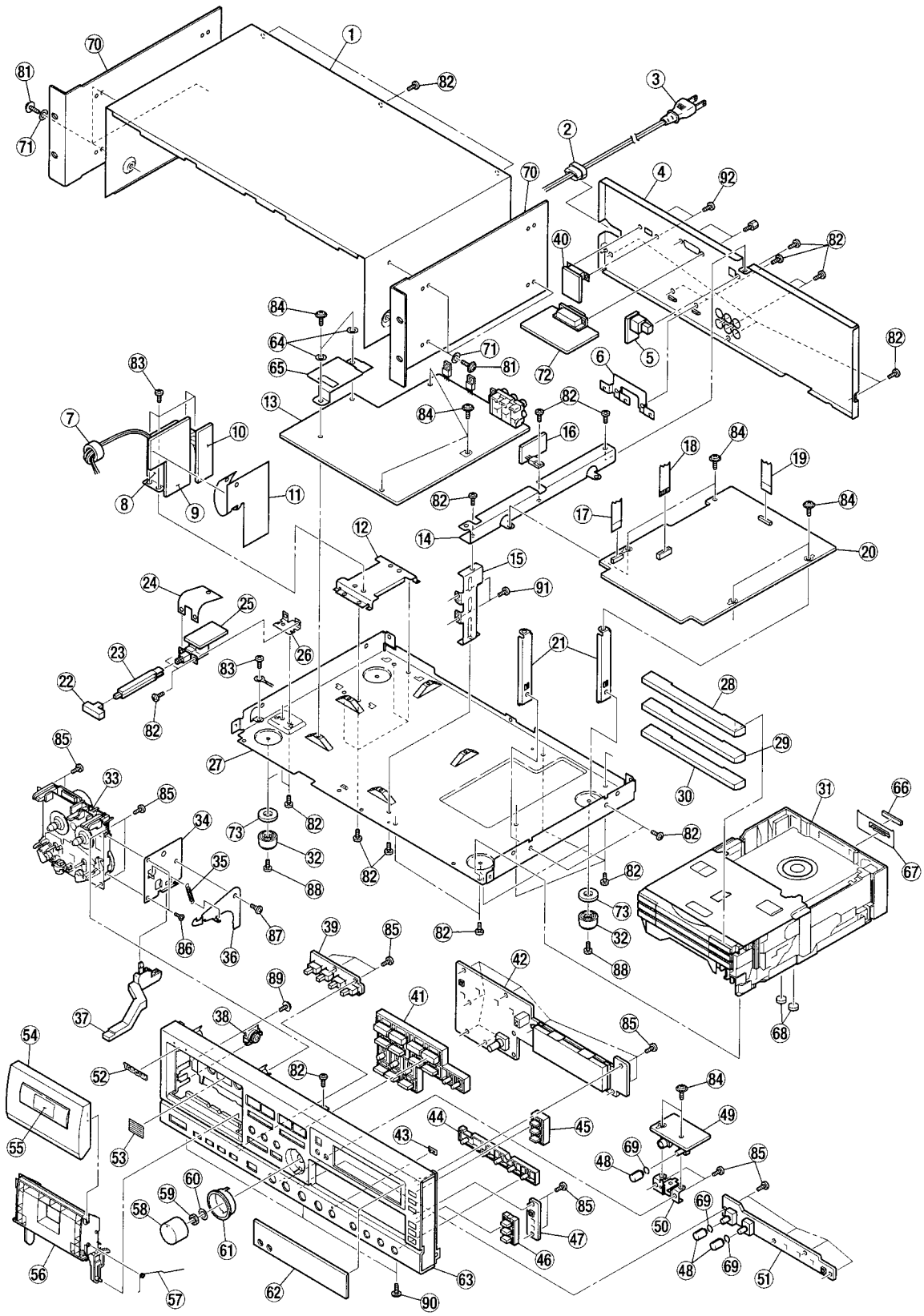
注 意

- プリント基板図は部品面を示しています。
- *印の部品は納期が若干かかります。
  あらかじめご了承ください。
- 分解図に部番のない部品および品番のない部品は供給できません。
- 標準の抵抗、コンデンサーは省略してあります。
  回路図を参照してください。
- ⚠印は安全重要部品です。
  交換する時は必ず指定の部品を使用してください。
- 仕向先
  [J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
  [K]:KOREA [E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

4. EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

EXPLODED VIEW-1

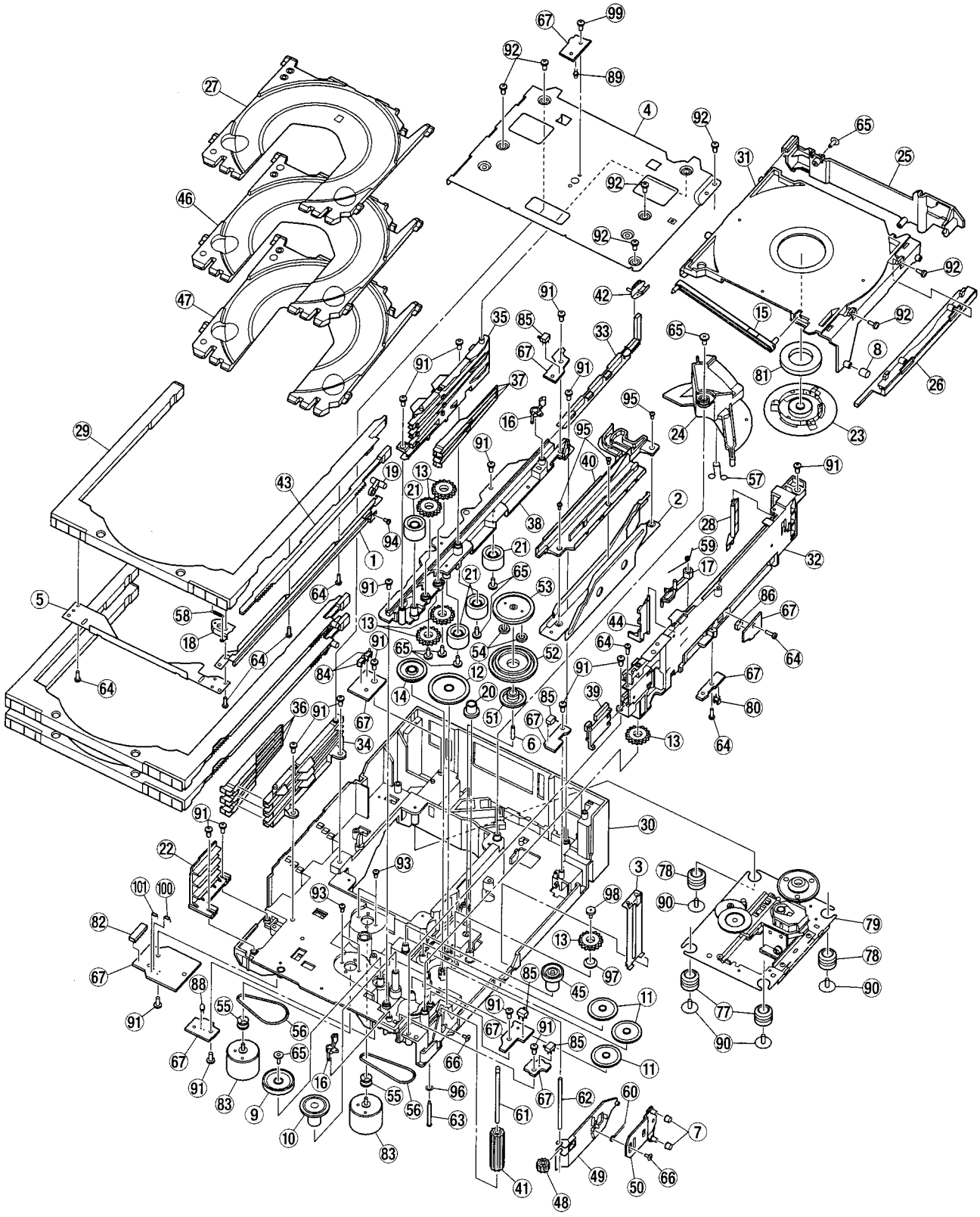


EXPLODED VIEW-1

REF.NO.	PARTS NO.	DESCRIPTION
1- 1	*3M0026000D	BONNET
1- 2	⚠ *3M000880	BUSHING,#2271
1- 3	⚠ 3E002120	POWER CORD [J]
	⚠ 3E009230	POWER CORD [US,C,GE]
	⚠ 3E006330	POWER CORD [K]
	⚠ 3E015210	POWER CORD [E]
	⚠ 3E000350	POWER CORD [UK]
	⚠ 3E000360	POWER CORD [A]
1- 4	*3M0109630A	REAR PANEL [J,K,E,UK,A]
	*3M0109640A	REAR PANEL [US,C,GE]
1- 5	*3E9526000A	PCB ASSY,DO [J]
1- 6	3M0025900A	PLATE,IC
1- 7	3E010000	FER.CORE,B18T 25X12X15
1- 8	⚠ *3E0139200B	TRANSFORMER,POWER
1- 9	*3E9526400A	PCB ASSY,TRANS(P) [J]
	*3E9526413A	PCB ASSY,TRANS(P) [US,C,GE]
	*3E9526437A	PCB ASSY,TRANS(P) [K]
	*3E9526440A	PCB ASSY,TRANS(P) [E,UK]
	*3E9526460A	PCB ASSY,TRANS(P) [A]
1-10	*3E9526500A	PCB ASSY,TRANS(S)
1-11	*3M0115500A	INSUL COVER,A
1-12	*3M0110100A	BRACKET,POWER TRANS
1-13	*3E9526200A	PCB ASSY,TAPE
1-14	*3M0109700A	BRACKET,PCB "A"
1-15	*3M0109800A	BRACKET,PCB "B"
1-16	*3E9528400A	PCB ASSY,REG
1-17	*3E0139000A	FFC,BNCD-P=1.0-K-15-180
1-18	*3E0138900A	FFC,BNCD-P=1.25-K-12-320
1-19	*3E0139100A	FFC,SFBNCD-P=1.0-K-16-320
1-20	*3E9525510A	PCB ASSY,CONTROL
1-21	*3M0109900A	BRACKET,PCB "C"
1-22	3M0030500B	BUTTON,POWER
1-23	*3M0108800A	ROD,POWER
1-24	*3M0115600A	INSUL COVER,B
1-25	*3E9526600A	PCB ASSY,P.SW
1-26	*3M0110200A	BRACKET,POWER S/W
1-27	*3M0109500A	CHASSIS,BOTTOM
1-28	3M0108030A	DOOR,CD1
1-29	3M0108040A	DOOR,CD2
1-30	3M0108050A	DOOR,CD3
1-31	3M0111400A	CD MECHA ASSY,MGC-F3000
1-32	3M0118200A	FOOT
1-33	*3M0111500A	MECH ASSY,CMAL2Z213A
1-34	*3M0029900A	BRACKET,EJECT A
1-35	3M0010600A	TORSION SPRING,EJECT
1-36	*3M0029800A	HOOK,EJECT A
1-37	*3M0108700A	KNOB,EJECT
1-38	3M0011200A	DAMPER
1-39	*3E9525800A	PCB ASSY,FRONT(B)
1-40	*3E9526700A	PCB ASSY,V SELECT [US,C,GE]
1-41	3M0108110A	KNOB,MAIN
1-42	*3E9525610A	PCB ASSY,FLD
1-43	*3M0109000A	LENS,PITCH CONTROL
1-44	3M0108400A	KNOB,SKIP

REF.NO.	PARTS NO.	DESCRIPTION
1-45	3M0108200A	KNOB,DISC
1-46	3M0108310A	KNOB,CD OPEN
1-47	*3E9525900A	PCB ASSY,FRONT(C)
1-48	3M0108600A	KNOB,VOLUME
1-49	*3E9526310A	PCB ASSY,HP
1-50	*3M0110000A	BRACKET,PHONE
1-51	*3E9525700A	PCB ASSY,FRONT(A)
1-52	*5720254101	NAME PLATE,TASCAM(S)
1-53	3M0062400A	PLATE,REFLECT
1-54	3M0107910A	DOOR,LID
1-55	3M0026500B	WINDOW,LID
1-56	3M0011100A	CASE,LEAD
1-57	3M0010400A	TORSION SPRING,CASE I
1-58	3M0108500A	KNOB,REC LEVEL
1-59	*3M001340	NUT,VR M9
1-60	*3M001350	PLAIN WSHR,VR M9.1
1-61	3M0109310A	HOLDER,REC LEVEL
1-62	3M0108910A	WINDOW,FLT
1-63	3M0107810A	FRONT PANEL
1-64	*3M0060100A	PLAIN WASHER,M3 D11.5
1-65	*3M0117700A	SHIELD PLATE,IC
1-66	*3M0115700A	CUSHION,GUARD
1-67	*3M0116500A	PLATE,FCC GUIDE
1-68	*3M0115400A	CUSHION
1-69	3M0062700A	RTNG RING-C,D7.7-0.8
1-70	*3M0026600C	RACK MOUNTING
1-71	*3M002020	FIBER WASHER,3X8X0.3T(BLK)
1-72	*3E9526100A	PCB ASSY,CONTROL I/O
1-73	*3M0118300A	CUSHION,FOOT
1-81	*3B0001810A	SCREW,J,S M3X10(BLK)
1-82	*3B0005708A	SCREW,BPB M3X8(BLK)
1-83	*3B0005408A	SCREW,BPB M4X8
1-84	3B0001306A	SCREW,J,S M3X6
1-85	*3B0000808A	SCREW,BPP M3X8
1-86	*3B0000004A	SCREW,BPS M2.6X4
1-87	*3M0010700A	SCREW,4X1.3S
1-88	3B0007206A	SCREW,BPA M3X6
1-89	*3B0002308A	SCREW,J P M3X8(BLK)
1-90	*3B0007300A	SCREW,FPS TITE M3X6
1-91	*3B0000810A	SCREW,BPP M3X10
1-92	*3B0004408A	SCREW,BPS M3X8(BLK) [US,C,GE]

EXPLODED VIEW-2

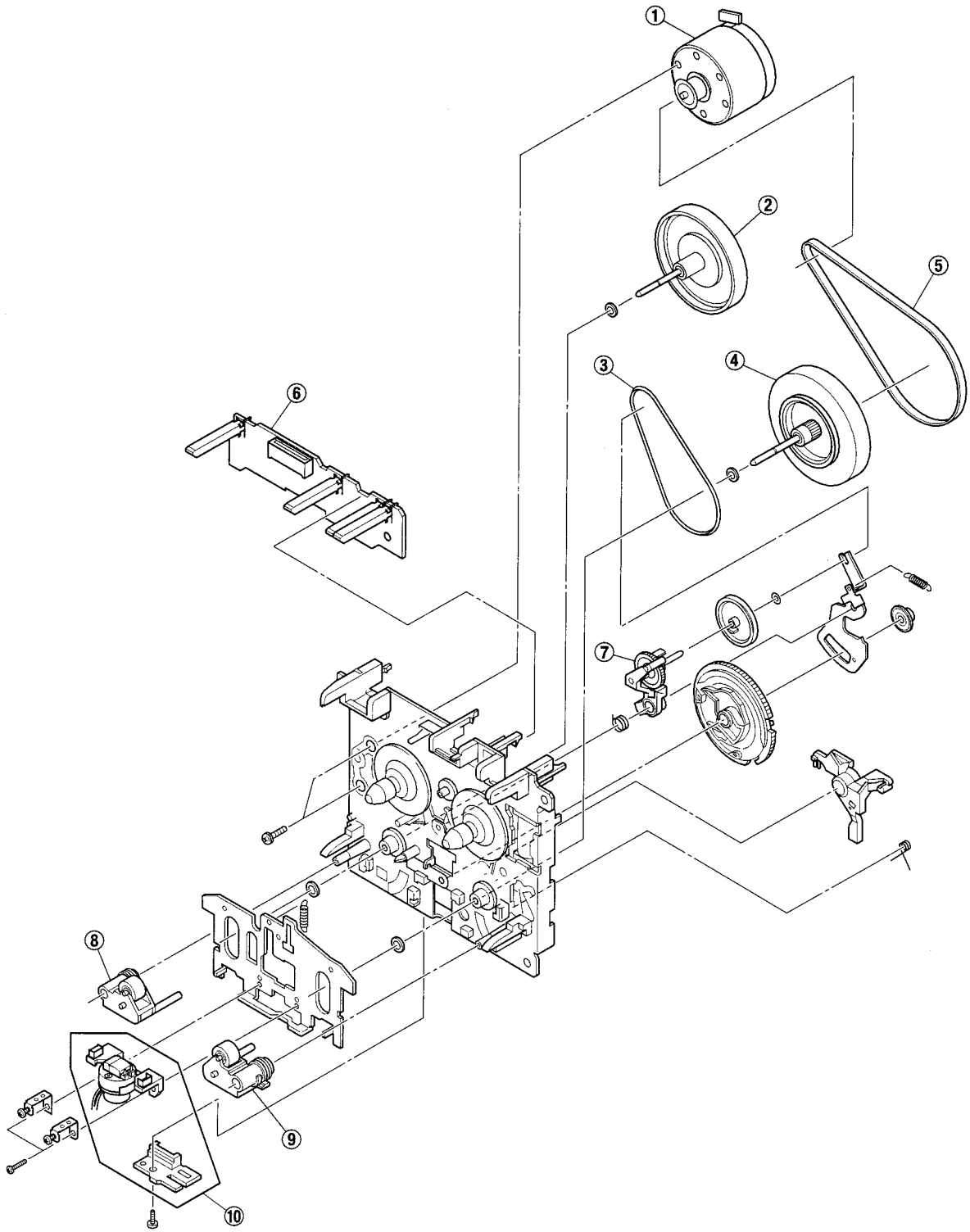


EXPLODED VIEW-2

REF.NO.	PARTS NO.	DESCRIPTION
2- 1	*9A08676300	REINFORCING HARDWARE(S)
2- 2	*9A08676400	SLIDER(LIFT)
2- 3	*9A08676500	REINFOTCING HARDWARE(R)
2- 4	*9A08676600	REINFOTCING HARDWARE(TOP)
2- 5	*9A08676700	REINFOTCING HARDWARE(F)
2- 6	*9A08676800	SHAFT(GEAR-C)
2- 7	*9A08676900	SHAFT(HOLDER GEAR)
2- 8	*9A08677000	SHAFT(HOLDER TRAY)
2- 9	9A08677100	PULLEY
2- 10	9A08677200	GEAR(TRAY MOTOR-A)
2- 11	9A08677300	GEAR(TRAY MOTOR-B)
2- 12	9A08677400	GEAR(TRAY MOTOR-C)
2- 13	9A08677500	GEAR(TRAY-A)
2- 14	9A08677600	GEAR(LIFT MOTOR-A)
2- 15	*9A08677700	ARM(JOINT)
2- 16	9A08677800	ARM(LOAD SW)
2- 17	9A08677900	LACK(GEAR)
2- 18	*9A08678000	ARM(TRAY-SUB)
2- 19	*9A08678100	ARM(TRAY-LOCK)
2- 20	*9A08678200	GEAR(LIFT-IDLER)
2- 21	9A08678300	GEAR(IDLER)
2- 22	9A08678400	GUIDE(TRAY OUTER-L)
2- 23	9A08678500	CLAMPER
2- 24	9A08678600	CAM(LIFT)
2- 25	*9A08678700	HOLDER(LIFT)
2- 26	*9A08678800	HOLDER(TRAY-R)
2- 27	*9A08678900	TRAY(SUB)
2- 28	*9A08679000	ARM(SWITCH CLOSE)
2- 29	*9A08679100	TRAY(MAIN)
2- 30	*9A08679200	CHASSIS(MAIN)
2- 31	*9A08679300	HOLDER(TRAY TOP)
2- 32	9A08679400	GUIDE(TRAY OUTER)
2- 33	*9A08679500	SLIDER(TRAY-B)
2- 34	*9A08679600	GUIDE(TRAY-L)
2- 35	9A08679700	GUIDE(TRAY-R)
2- 36	9A08679800	ARM(TRAY CATCH-L)
2- 37	9A08679900	ARM(TRAY CATCH-R)
2- 38	*9A08680000	CHASSIS(GUIDE)
2- 39	*9A08680100	GUIDE(TRAY MID)
2- 40	9A08680200	GUIDE(CAM)
2- 41	*9A08680300	GEAR(TRAY-IDLER)
2- 42	*9A08680400	SLIDER(TRAY-A)
2- 43	9A08680500	SLIDER(TRAY LOCK)
2- 44	*9A08680600	ARM(SWITCH OPEN)
2- 45	9A08680700	PULLEY(B)
2- 46	*9A08680800	TRAY(SUB-2)
2- 47	*9A08680900	TRAY(SUB-3)
2- 48	9A08681000	GEAR(TRAY-FINAL)
2- 49	*9A08681100	HOLDER(GEAR-B)
2- 50	*9A08681200	HOLDER(GEAR-C)
2- 51	9A08681400	GEAR(SUN)
2- 52	9A08681500	GEAR(INTERNAL)
2- 53	9A08681600	GEAR(CARRIER)
2- 54	9A08681700	GEAR(PLANET)
2- 55	9A08681800	PULLEY(MOTOR-A)

REF.NO.	PARTS NO.	DESCRIPTION
2- 56	9A08681900	BELT
2- 57	*9A08682000	TORSION SPRING(CAM LIFT)
2- 58	*9A08682100	EXTENSION SPR(TRAY LOCK)
2- 59	9A08682200	TORSION SPR(LACK GEAR)
2- 60	*9A08682300	TORSION SPR(HOLDER GEAR)
2- 61	*9A08682400	SHAFT(GEAR-B)
2- 62	*9A08682500	SHAFT(GEAR-A)
2- 63	*9A08682600	SHAFT(PULLEY)
2- 64	*9A08682700	SCREW(TRAY)
2- 65	9A07827800	SCREW(A2)
2- 66	*9A07825200	SCREW(SUB-L)
2- 67	*9A08682800	PCB(MAIN)
2- 77	9A07825700	INSULATOR 37(BLUE)
2- 78	9A07825800	INSULATOR 25(GREEN)
2- 79	9A08683800	TRAVERSE UNIT
2- 80	*9A08683900	PHOTO INT,GP1S93
2- 81	*9A08684000	MAGNET(2)
2- 82	*9A08684100	CONNECTOR,15FMN-STK
2- 83	9A08684200	DC MOTOR,MDN4BT3MEA
2- 84	9A08684300	SWITCH,MPU10184MLBO
2- 85	9A08684400	SWITCH,MPU11470MLBO
2- 86	9A08684500	SWITCH,MPU11301MLBO
2- 88	9A07825000	PHOTO TR,RPT-38PB3F
2- 89	*9A07746000	LED,SIR-34ST3F
2- 90	9A07827900	SCREW,TAP TITE 2.6X6
2- 91	9A08684600	SCREW,BIND TAPPING 2.6X8
2- 92	*9A08684700	SCREW,BIND TAPPING 2.6X6(BL)
2- 93	*9A08684800	SCREW,SEMS 2X4
2- 94	*9A08684900	SCREW,TAPPING 2X3.5
2- 95	*9A08685000	SCREW,MACHINE M2X2.5
2- 96	*9A08685100	POLY WS,1.57X4X0.5 CUT
2- 97	9A08685200	COMPRESSION SPRING(GEAR)
2- 98	9A08685300	SCREW(GEAR)
2- 99	*9A08685400	SCREW,BIND TAPTITE 2.6X6
2-100	*9A08685500	RESISTOR,390 OHM
2-101	*9A07828000	RESISTOR,330 OHM

EXPLODED VIEW-3



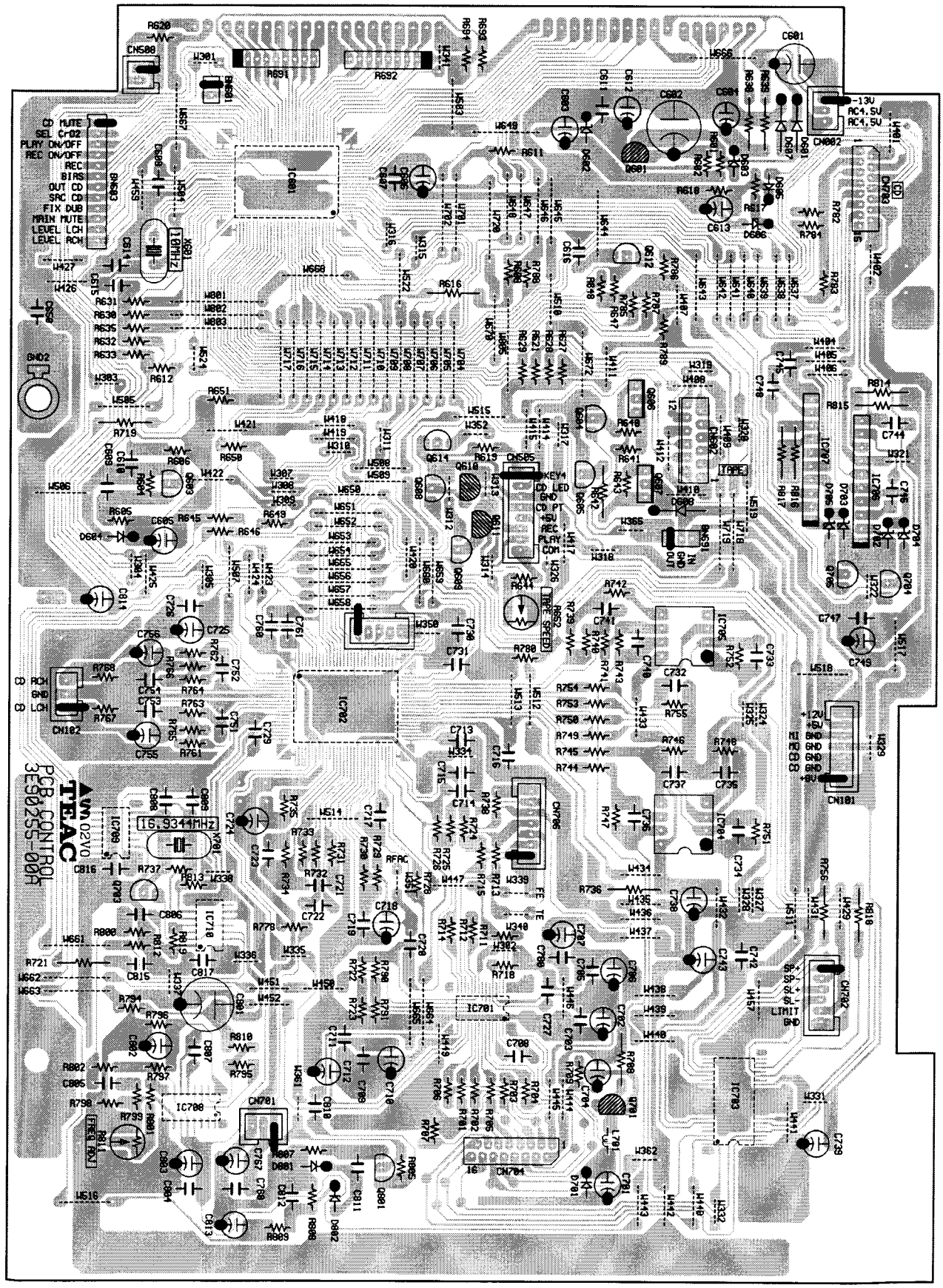
EXPLODED VIEW-3

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
3- 1	9A08686200	MTR MAIN BLK	
3- 2	9A08686700	ASSY F/W	
3- 3	9A08687000	F/R BELT	
3- 4	9A08686600	ASSY F/W	
3- 5	9A08686500	MAIN BELT	
3- 6	*9A08686300	PCB CONTROL BLK	
3- 7	9A08686400	CLUTCH ASSY BLK	
3- 8	9A08686900	ROLLER PINCH BLK L	
3- 9	9A08686800	ROLLER PINCH BLK R	
3-10	9A08686100	PLATE HD BLK	

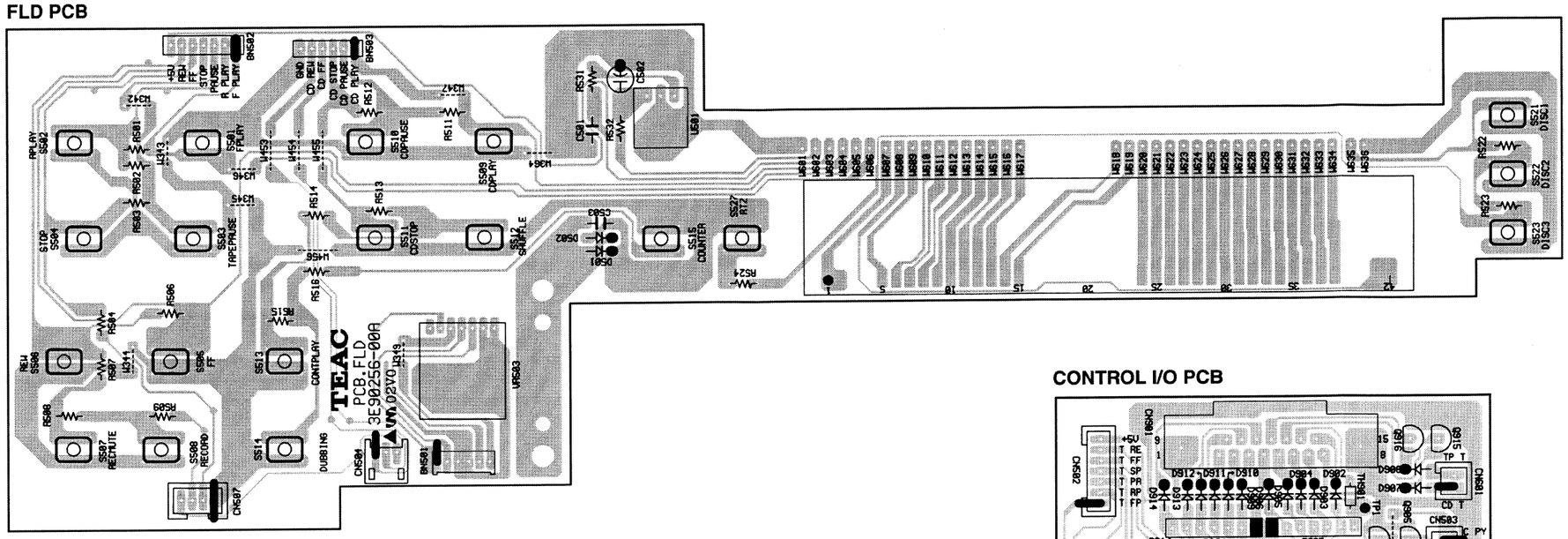
5. PC BOARDS AND PARTS LIST

基板図とパーツリスト

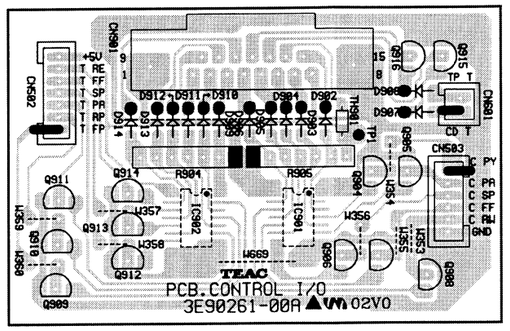
CONTROL PCB



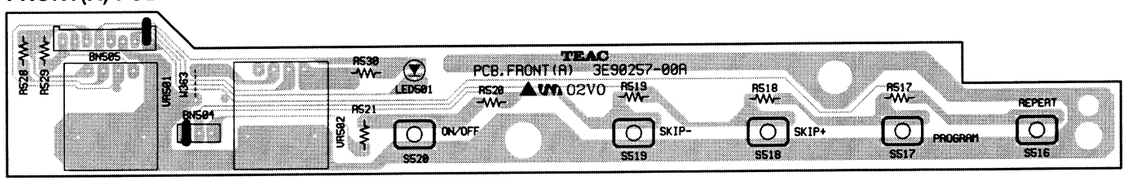
FLD PCB



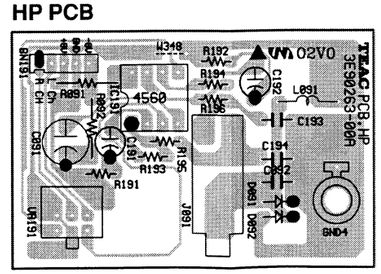
CONTROL I/O PCB



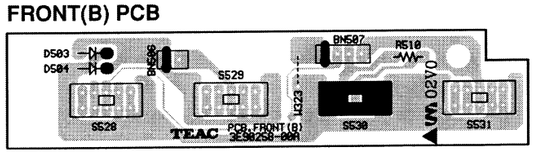
FRONT(A) PCB



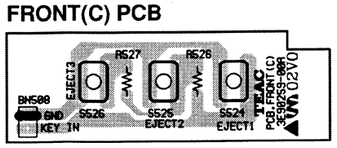
HP PCB



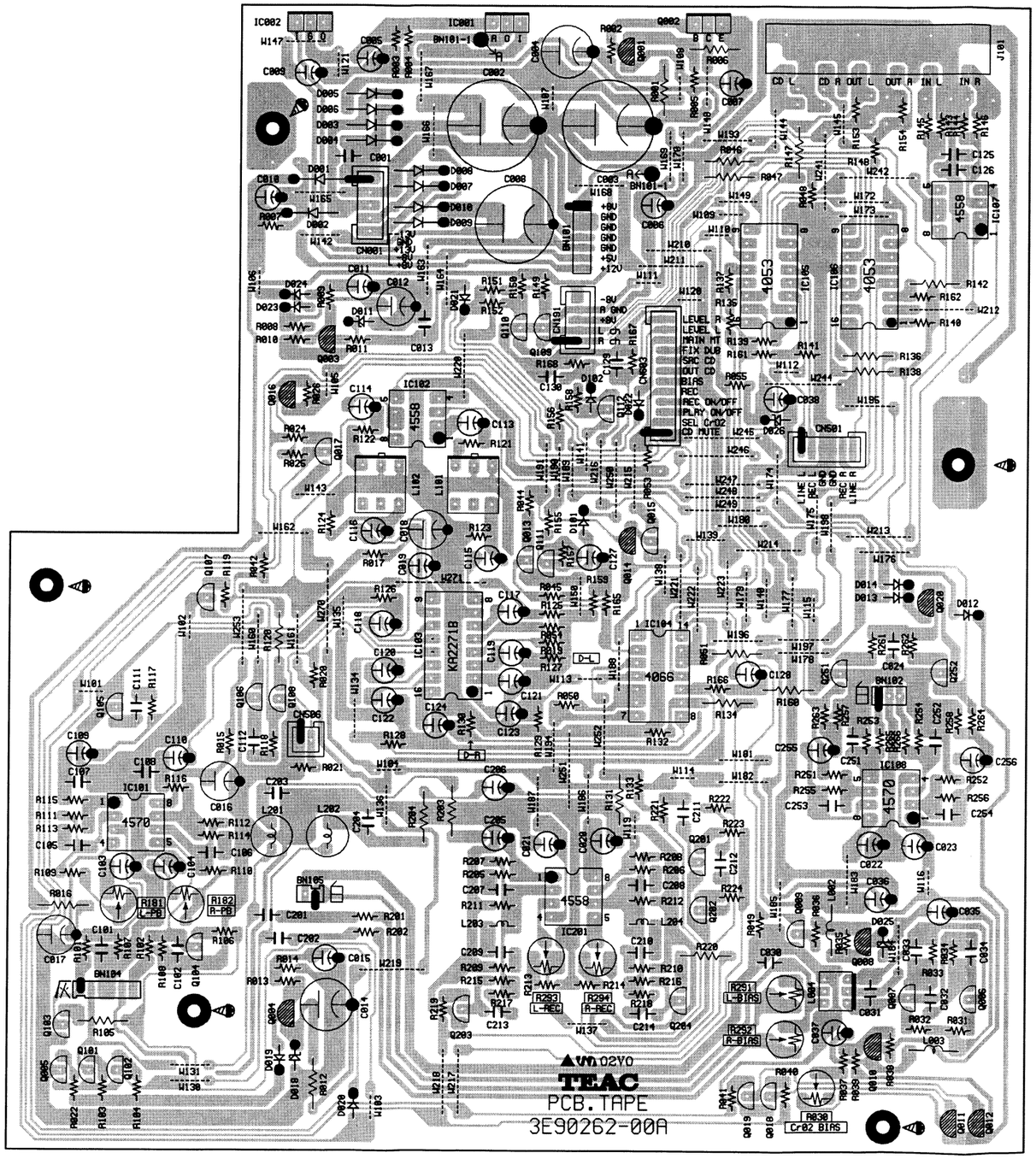
FRONT(B) PCB



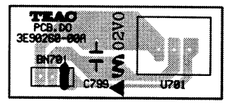
FRONT(C) PCB



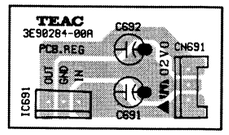
TAPE PCB



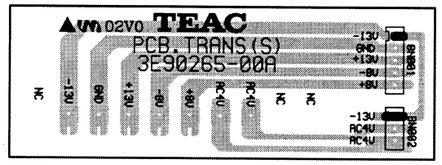
DO PCB



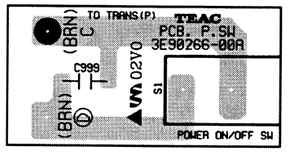
REG PCB



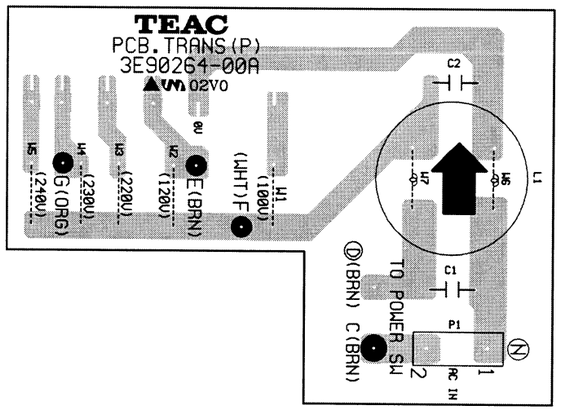
TRANS (S) PCB



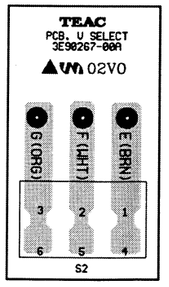
P.SW PCB



TRANS (P) PCB



V SELECT PCB



CONTROL PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		* 3E9525510A	PCB ASSY, CONTROL
C601	⚠	3C000580	CE, 63V 220UF M
C602	⚠	3C000790	CE, 50V 220UF M
C613	⚠	3C000360	CE, 50V 10UF M
CN002		3E010350	CONNECT PLUG, B3B-PH-K-S
CN101		3E010390	CONNECT PLUG, B7B-PH-K-S
CN102		3E001150	CONNECT PLUG, B3B-EH-A
CN505		3E010400	CONNECT PLUG, B8B-PH-K-S
CN508		3E010340	CONNECT PLUG, B2B-PH-K-S
CN602		3E014220	CONNECT, 12FE-BT-VK-N
CN701		3E010350	CONNECT PLUG, B3B-PH-K-S
CN702		3E010380	CONNECT PLUG, B6B-PH-K-S
CN703		3E014200	CONNECT, 15FMM-BTK
CN704		3E014210	CONNECT, 16FMM-BTRK
D601	⚠	3S000031	DIODE, 1N4003-TR
D602		3S003591	ZDI, MTZJ30B
D603		3S000681	ZDI, MTZJ5.1B
D604		3S000241	DIODE, 1SS133
D605	⚠	3S000031	DIODE, 1N4003-TR
D606		3S000681	ZDI, MTZJ5.1B
D607	⚠	3S000031	DIODE, 1N4003-TR
D608		3S000031	DIODE, 1N4003-TR
D701		3S000241	DIODE, 1SS133
D702, D703		3S001891	ZDI, MTZJ6.2B
D704		3S003441	ZDI, MTZJ4.7B
D705		3S000681	ZDI, MTZJ5.1B
D801, D802		3S003281	DIODE, RB721Q-40
GND2		3E0043200A	TERMINAL, EARTH PLATE B
IC601		S00419000A	IC, CXP82224-148Q
IC701		3S003300	IC, CXA2581N
IC702		3S003310	IC, CXD2598Q
IC703		3S001590	IC, KA9258D
IC704, 705		3S000260	IC, NJM4558D
IC706, 707		3S003600	IC, BA6209N
IC708		3S002550	IC, BA7082F
IC709		3S001340	IC, 74HCU04AF
IC710		3S001620	IC, 74HC00 SOP
L701		3E003711	COIL, 10UH EC24-100K-T2
Q601	⚠	3S000020	TR, 2SA1015GR
Q603		3S000000	TR, 2SC1815GR
Q604, Q605		3S000291	TR, DTC124ES
Q606, Q607		3S003330	TR, 2SB1240 TV2Q
Q608, Q609		3S000291	TR, DTC124ES
Q610, Q611		3S000301	TR, DTA124ES
Q612, Q614		3S000291	TR, DTC124ES
Q701		3S000020	TR, 2SA1015GR
Q703		3S000741	TR, DTC143TS
Q705		3S000291	TR, DTC124ES
Q801		3S000000	TR, 2SC1815GR
R652		3R004580	VR, SEMI-FIXED RH0615-4.7K
R758		3R004810	RD, 1/2W 10 OHM J
R811		3R004590	VR, SEMI-FIXED RH0615-10K
R814-R817		3R004840	RD, 1/4W 4.7 OHM NON FLAME
X601		3E011740	RESONATOR, CST 10.00MTW
X701		3E013070	X'TAL, 16.9344MHZ

FLD PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	* 3E9525610A	PCB ASSY, FLD
	* 3M0062200A	RC CUSHION
	* 3M0109200A	HOLDER, FLT
CN504	3E001290	CONNECT PLUG, S3B-PH-K-S
CN507	3E010360	CONNECT PLUG, B4B-PH-K-S
D501, D502	3S000241	DIODE, 1SS133
FL501	3E0131800A	DISPLAY, FL, HNA-11MM33
S501-S515	3E002070	SW, TACT SKQSAB HMR-187
S521-S523	3E002070	SW, TACT SKQSAB HMR-187
S527	3E002070	SW, TACT SKQSAB HMR-187
U501	E0062220	RMCN RCVR, RPM6938-V4
VR503	3R004890	VAR RES, 10KAX2 RK14K12D

FRONT(A) PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	* 3E9525700A	PCB ASSY, FRONT(A)
	* 3M0068404A	LED HOLDER, LED3-4
LED501	3S003480	LED, LSE2040(ORG)
S516-S520	3E002070	SW, TACT SKQSAB HMR-187
VR501	3R003980	VAR REG, 5KB RK11K113 CC
VR502	3R003980	VAR REG, 5KB RK11K113 CC

FRONT(B) PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	* 3E9525800A	PCB ASSY, FRONT(B)
D503, D504	3S000241	DIODE, 1SS133
S528, S529	3E014560	SW, SLIDE TKR-0022/473
S530	3E014570	SW, SLIDE TKR-0023/474
S531	3E014560	SW, SLIDE TKR-0022/473

FRONT(C) PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	* 3E9525900A	PCB ASSY, FRONT(C)
S524-S526	3E002070	SW, TACT SKQSAB HMR-187

CONTROL I/O PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	* 3E9526100A	PCBA, CONTROL I/O
CN502	3E010390	CONNECT PLUG B 7B-PH-K-S
CN503	3E010380	CONNECT PLUG B 6B-PH-K-S
CN601	3E010340	CONNECT PLUG B 2B-PH-K-S
CN901	3E010920	CONECTOR, D-SUB 15P
D902-914	3S000241	DIODE, 1SS133 T-77
IC901-902	3S001630	IC, 74HC04 SOP
Q904-916	3S000291	TR, DTC124ES TP
R904, 905	3R005470	R, ARRAY 47KX6
TH901	E0039020	CKT PTCT, RXE010

HP PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		* 3E9526310A	PCB ASSY, HP
D091, D092		3S000241	DIODE, 1SS133
GND4		3E0043200A	TERMINAL, EARTH PLATE B
IC191		3S000840	IC, BA4560
J091		3E002160	JACK, JY-6313-01-030
L091		3E003721	COIL, 100UH EC24-101K-T2
VR191		3R003920	VAR REG, 50KAX2 RK09K12A

TAPE PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		* 3E9526200A	PCB ASSY, TAPE
C001	⚠	3C003340	CQ, 100V 0.022UF J MYLAR
C002, C003	⚠	3C001210	CE, 25V 3300UF M
C004	⚠	3C000920	CE, 16V 470UF M
C008	⚠	3C001200	CE, 16V 3300UF M
C010	⚠	3C000360	CE, 50V 10UF M
C011	⚠	3C000420	CE, 35V 22UF M
CN001		3E001170	CONNECT PLUG, B5B-EH-A
CN191		3E010370	CONNECT PLUG, B5B-PH-K-S
CN501		3E010380	CONNECT PLUG, B6B-PH-K-S
CN506		3E010340	CONNECT PLUG, B2B-PH-K-S
CN603		3E010440	CONNECT PLUG, B12B-PH-K-S
D001-D010	⚠	3S000031	DIODE, 1N4003-TR
D011		3S000671	ZDI, MTZJ4.3B
D012-D014		3S000241	DIODE, 1SS133
D018		3S001581	ZDI, MTZJ3.0B
D019-D022		3S000241	DIODE, 1SS133
D023, D024		3S000031	DIODE, 1N4003-TR
D026		3S001891	ZDI, MTZJ6.2B
D101, D102		3S000241	DIODE, 1SS133
IC001	⚠	3S000250	IC, NJM317F
IC002	⚠	3S000650	IC, NJM7805FA
IC101		3S000280	IC, UPC4570C
IC102		3S000260	IC, NJM4558D
IC103		3S002520	IC, KA2271B
IC104		3S000430	IC, BU4066BC
IC105, 106		3S000810	IC, TC4053BP
IC107		3S000260	IC, NJM4558D
IC108		3S000280	IC, UPC4570C
IC201		3S000260	IC, NJM4558D
J101		3E014190	JACK, RJ-1074B-09-0320A
L002, L003		3E003711	COIL, 10UH EC24-100K-T2
L004		3E0042800A	TRANS, BIAS OSC 85KHZ
L101, L102		3E003730	FILTER, MPX LPF FXD2
L201, L202		3E003740	FILTER, BIAS TRAP 85KHZ
L203, L204		3E003690	COIL, #7159 8.2MH
Q001	⚠	3S000020	TR, 2SA1015GR
Q002		3S000400	TR, 2SB1015Y
Q003, Q004		3S000020	TR, 2SA1015GR
Q005, Q006		3S000000	TR, 2SC1815GR
Q008		3S000020	TR, 2SA1015GR
Q009		3S000291	TR, DTC124ES
Q010		3S000020	TR, 2SA1015GR
Q011, Q012		3S000301	TR, DTA124ES
Q013		3S000000	TR, 2SC1815GR
Q014		3S000301	TR, DTA124ES

TAPE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
Q015	3S000291	TR, DTC124ES
Q016	3S000301	TR, DTA124ES
Q017-Q019	3S000000	TR, 2SC1815GR
Q020	3S000301	TR, DTA124ES
Q101-Q104	3S000000	TR, 2SC1815GR
Q105, Q106	3S000741	TR, DTC143TS
Q107, Q108	3S000000	TR, 2SC1815GR
Q109, Q110	3S000731	TR, 2SD2144S
Q111, Q112	3S000000	TR, 2SC1815GR
Q201-Q204	3S000000	TR, 2SC1815GR
Q251, Q252	3S000731	TR, 2SD2144S
R030	3R004580	VR, SEMI-FIXED RH0615-4.7K
R181, R182	3R004530	VR, SEMI-FIXED RH0615-100
R291, R292	3R004610	VR, SEMI-FIXED RH0615-47K
R293, R294	3R004590	VR, SEMI-FIXED RH0615-10K

DO PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	* 3E9526000A	PCB ASSY, DO [J]
U701	3S002290	IC, GP1F32T

TRANS(S) PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	* 3E9526500A	PCB ASSY, TRANS(S)

TRANS(P) PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		* 3E9526400A	PCB ASSY, TRANS(P) [J]
		* 3E9526413A	PCB ASSY, TRANS(P) [US, C, GE]
		* 3E9526437A	PCB ASSY, TRANS(P) [K]
		* 3E9526440A	PCB ASSY, TRANS(P) [E, UK]
		* 3E9526460A	PCB ASSY, TRANS(P) [A]
L1	⚠	3E004290	COIL, 1MH/1.5A [E, UK]
P1		3E002170	PIN, TERMINAL LAPPING 2P

REG PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		* 3E9528400A	PCB ASSY, REG
CN691		3E001430	CONNECT PLUG, S3B-EH-A
IC691	⚠	3S002170	IC, NJM7812FA

P.SW PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		* 3E9526600A	PCB ASSY, P.SW
C999	⚠	3E004300	S.KILLER, CS12-F2GA472MYAS
S1	⚠	3E003770	SW, POWER SDDLD1-A2-F-1

V SELECT PCB ASSY

REF. NO.		PARTS NO.	DESCRIPTION
		* 3E9526700A	PCB ASSY, V SELECT [US, C, GE]
S2	⚠	3E002110	SW, SLIDE SL13B-022

6. INCLUDED ACCESSORIES

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INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS	
	3D0044600A	OWNER'S MANUAL, JAPANESE [J]		
	3D0044700A	OWNER'S MANUAL, E/F/G/I/S [EXCEPT J]		English/French/German/Italian/Spanish
	3E0156100A	REMOTE CONTROL UNIT, RC-A630		
	3M0028300A	RACK MOUNTING SCREW KIT		
	*3E003660	BATTERY, UM-3(2P X ED)		

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